that the GP had referred them to another doctor for evaluation and treatment. Most women in the UK first discussed UI with a GP whereas in Germany most discussed UI with a specialist. In Spain and France about half the women first discussed their UI with a GP. CONCLUSIONS: GPs are involved to varying degrees in the initial management of UI in France, Germany, Spain and the UK. Even in countries where women have a choice of whether to see a GP or specialist about UI many choose to have their first contact with a GP.

**SUMMARIZING POPULATION HEALTH USING EQ-5D**

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**OBJECTIVES:** Summary measures of population health (SMPH) are used by national governments and international agencies for comparative purposes. Such measures have other uses, for example, in monitoring changes in health status over time. Competing approaches for calculating SMPH have been developed using different metrics: disability-adjusted life years (DALY) and quality-adjusted life years (QALY). This lack of standardization in approach might produce conflicting results. The present study was designed to measure disease burden in a US national population survey (MEPS) to test both approaches. **METHODS:** Two methods are compared here: first, the health expectancy method, computing health-adjusted life expectancy by combining health related quality of life (HrQoL) and survival data; second, the health gap method, measuring disease burden by combining the losses due to premature mortality and non-fatal conditions. Both EQ-5D social preference weights and Global Burden of Disease disability weights are employed to assess the effect of different scoring systems. Four disease areas were studied: diabetes, stroke, coronary heart disease (CHD) and asthma. **RESULTS:** Using the health expectancy method based on EQ-5D values, the highest QALY loss of 3.67 years per person was associated with CHD, followed by diabetes (1.26), stroke (1.15) and asthma (0.57). The results based on disability weights had the same rank order among diseases but varied in magnitude by between 1% and 42% compared to EQ-5D estimates. Results were similar using the health gap method. Disability-weighted estimate for CHD was $508 thousand DALYs, followed by diabetes (4378), stroke (3277) and asthma (1429); EQ-5D values produced the same rank order but variation was lower (2% to 15% lower). **CONCLUSIONS:** A single metric for measuring health status in clinical and population studies would help improve knowledge transfer between health care decision-makers. EQ-5D has potential value as a summary measure of population health.

**EUROPEAN SURVEILLANCE OF ANTIMICROBIAL CONSUMPTION (ESAC): DEVELOPING VALID ANTIBIOTIC PRESCRIBING QUALITY INDICATORS FOR AMBULATORY CARE**

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**OBJECTIVES:** Indicators to measure the quality of health care are increasingly being developed and used both by health care professionals and policy makers. In the context of increasing costs related to antimicrobial use and resistance we aimed to develop valid antibiotic prescribing quality indicators for ambulatory care, producible on the basis of present ESAC data and using different metrics: disability-adjusted life years (DALY) and quality-adjusted life years (QALY). This lack of standardization in approach might produce conflicting results. The present study was designed to measure disease burden in a US national population survey (MEPS) to test both approaches. **METHODS:** Experts from 15 countries participating in a European Science Foundation workshop in September 2005 proposed a set of 24 indicators and subsequently scored these indicators for their relevance in controlling antimicrobial resistance, patient health benefit, prescription cost-effectiveness and public health policy making using a scale ranging from 1 (= completely disagree), over 5 (= uncertain) to 9 (= completely agree). The scores were processed according to the UCLA-RAND appropriateness method and each indicator was judged valid if there was consensus and the median score was not within the 1–6 interval. **RESULTS:** Twenty-two participants scored. Nine indicators were rated as valid antibiotic prescribing indicators on all four dimensions and three extra for their relevance at least to prescription cost-effectiveness. The 2004 indicator values of a valid set of 12 quality indicators of cost-effective antibiotic utilisation are available for 28 individual countries. The most informative indicator “total outpatient use” varied more than threefold between the countries with the highest (33.4 DDD per 1000 inhabitants per day (DID) in Greece) and lowest (9.2 DID in Russia) use. **CONCLUSIONS:** In line with the main objectives of antimicrobial use surveillance at the European level, this subset can be used to describe antibiotic use in ambulatory care in order to assess the quality of antibiotic prescribing and its cost-effectiveness. The indicator values allow individual countries to position themselves and to define their own benchmark.
based on the epidemiology of infectious diseases, national guidelines, and pricing and reimbursement mechanisms.

**IN3**

**RELATIONSHIP BETWEEN ADHERENCE TO ANTIRETROVIRAL THERAPY AND THE COST-EFFECTIVENESS OF ANTIRETROVIRAL THERAPY**

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**OBJECTIVE:** The nation’s largest single provider of health care to those infected with Human Immunodeficiency Virus (HIV) is the Department of Veterans Affairs (VA). The clinical effectiveness of highly active antiretroviral therapy (HAART) depends considerably on an individual’s ability to adhere closely to therapy. The objective of this study was to assess the relationship between patient adherence to HAART and the cost-effectiveness of HAART in antiretroviral-naïve HIV-infected VA patients.

**METHODS:** The overall design of the study is a hybrid between an observational study and a decision-analytic model. Kaplan-Meier survival estimates, calculated from the VA’s laboratory and clinical data, were used to model HIV disease progression. Pharmacy-based adherence was calculated using refill percent adherence obtained from prescription records; individuals were categorized as adherent if adherence was equal to or greater than 95%. Inpatient and outpatient costs were derived from the VA Health Economics Resource Center estimates. Outpatient prescription costs were obtained from the VA Pharmacy Benefits Management database. Markov Monte Carlo simulations were conducted to project the cost-effectiveness of adherence to HAART. Costs and quality-adjusted life-years (QALY) were discounted at 3%

**RESULTS:** For the five-year Markov Monte Carlo simulations, the overall costs of adherent behavior were lower than those of non-adherent behavior. In addition, the projected QALYs of adherent behavior were greater than those of non-adherent behavior; therefore, the cost-effectiveness of non-adherent behavior was dominated by adherent behavior. For the 20-year simulations, the cost-effectiveness of adherent behavior, compared to non-adherent behavior, was less than $15,000/QALY.

**CONCLUSIONS:** Medication non-adherence in chronic conditions is a recognized public health problem. The association between medication adherence and improved health outcomes is well documented and the results of this study provide further evidence of this relationship. In this study, the marginal costs and effects associated with adherent behavior, compared to non-adherent behavior, are well below acceptable willingness-to-pay thresholds.

**IN4**

**MEDICAL MANAGEMENT AND COSTS ASSOCIATED WITH STAPHYLOCOCCUS AUREUS (SA) BACTEREAMIA IN HAEMODIALYSIS PATIENTS: A COST-OF-ILLNESS STUDY**

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**OBJECTIVES:** SA is the major cause of bacteremia and a major cause of morbidity and mortality in haemodialysis (HD) patients. The objective was to assess the health care costs associated with SA bacteremia requiring hospitalisation in HD patients in Belgium. METHODS: Data on resource utilization associated with SA bacteremia were retrospectively collected from hospital files. Eligible patients were HD patients requiring hospitalization due to SA in the years 2002–2005. Centres were selected based on setting (urban-rural) and region (north-south). Direct medical costs from the payers’ perspective were considered. Costs were obtained by multiplying the intensity of medical resource consumption in physical units by the direct cost per unit. RESULTS: 43 patients (32 males) were included with a mean age of 71.5 (St.Err 1.78). The majority of patients (55.8%) underwent catheter dialysis via central venous catheters, 44.2% via arteriovenous fistulas. The pathogen was methicillin resistant SA (MRSA) in 49.1% and methicillin sensitive SA (MSSA) in 50.7% of cases. Vascular access was the suspected source of bacteremia in 62.8% of patients. Bacteremia related complications such as septic arthritis or endocarditis, occurred in 41.9% of patients. Overall mortality (within 90 days) was 32.6%, SA bacteremia related mortality was 23.3%. The mean total cost of SA bacteremia treatment was $8971 (95%CI: 5082–12861). This includes hotel cost ($3945), inhosital tests and procedures ($716), inpatient and ambulatory drugs ($476), physician visits ($465) and bacteremia related readmissions ($1779). MRSA patients showed poorer outcomes, in terms of mortality as well as complications and also incurred higher costs, 14,163 € versus 6188 € for MSSA patients. In multivariate regression analysis on log-transformed costs, significant cost drivers were older age and the occurrence of complications. Complications occurred more frequently in the more costly MRSA patients. CONCLUSION: SA bacteremia in haemodialysis patients is associated with serious complications, high mortality rates and high health care costs.

**METHODS & CONCEPTS II**

**MC5**

**HUMANISTIC BURDEN AND HEALTH RESOURCE UTILIZATION AMONG NEOVASCULAR AGE-RELATED MACULAR DEGENERATION (AMD) PATIENTS: RESULTS FOR GERMANY FROM A MULTI-COUNTRY CROSS-SECTIONAL STUDY**

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**OBJECTIVES:** This cross-sectional, observational, case-control study was undertaken in 4 EU countries and Canada to characterize and quantify the humanistic and economic burden of illness in AMD patients compared to elderly controls. Data for Germany are reported herein. METHODS: Of 401 bilateral neovascular AMD patients and 471 elderly non-AMD (control) subjects, 83 AMD patients and 93 controls were recruited in Germany. Physicians recorded demographic and treatment information. Patients completed a telephone survey of the National Eye Institute Visual Function Questionnaire (NEI-VFQ-25), the EuroQol (EQ-5D), the Hospital Anxiety and Depression Scale (HADS), and history of falls, fractures and health resource utilization. The impact of AMD on functioning and health resource utilization was compared between AMD patients and controls using chi-square tests, analysis of variance, and multivariate regression models. RESULTS: The adjusted mean (95% CI) NEI-VFQ overall scale score was 51.31 (37.72, 64.90) in AMD patients, which was substantially worse than in controls (96.31 [82.75, 109.87]) after adjusting for better-seeing eye visual acuity, age, gender, and co-morbid diseases (p < 0.0001). AMD patients reported significantly more depression symptoms than controls on the HADS scales (adjusted mean depression scores: 6.17 vs. 2.69, p < 0.0001) after adjusting for covariates. AMD affected patients’ perceptions of their general health significantly more than control subjects measured by the EQ-5D (0.69 vs. 0.79, p = 0.0360). Average annual per patient costs were $12,156.